PATENT CLAIMS

1. A microphone component comprising at least one piezoelectric transflexural diaphragm element (3) and a signal interface element comprising conductors (10, 12) characterized in that the signal interface element is a flexible printed circuit (8) with a stiffness below that of the piezoelectric transflexural diaphragm element (3), and that the electrical and mechanical connection between the signal interface element (8) and the piezoelectric transflexural diaphragm element (3) is made in a material whose electrical resistance is negligible with respect to the output resistance of the piezoelectric transflexural diaphragm element (3) and whose stiffness is below that of the signal interface element (8) while being able to bond the signal interface element (8) and the piezoelectric transflexural element (3) to each other.

2. A microphone component according to claim 1, characterized in that the mechanically and electrically connecting material is an anisotropic conducting polymer.

3. A microphone component according to claim 2, characterized in that the anisotropic conducting polymer is in the form of an anisotropic conducting adhesive tape.

4. A microphone component according to claim 2, characterized in that the anisotropic conducting polymer is in the form of a curable dispersion of conducting particles.

5. A microphone component according to claim 1, characterized in that the signal interface element (8) is connected to the piezoelectric transflexural diaphragm element (3) by means of conductive adhesive tape patterned to correspond to terminal areas (5, 6) on the piezoelectric transflexural diaphragm element (3).

6. A microphone component according to claim 1, characterized in that it further comprises at least one supporting resilient layer (2; 14) on either side of the assembly (3, 4, 8).

7. A microphone component according to claim 6, characterized in that a mechanically protective front surface (16) is provided on the outside of the supporting resilient layer (2; 14).

8. A microphone component according to claim 7, characterized in that the mechanically protective front surface is an elastic disc (16) of essentially the same dimensions as the piezoelectric transflexural diaphragm element (3).

9. A microphone component according to claim 7, characterized in that the elastic disc (16) is made as a metal disc having springlike characteristics.

10. A microphone component according to claim 6, characterized in that the resilient layer (14) is an elastomer foam.

11. A microphone component according to claim 1, characterized in that it is adapted to be removably fixed in a cavity by means of a foam pad (1) that is supplied with an adhesive layer protected by a removable cover to be removed before fitting the microphone component into the cavity.

12. A microphone component according to claim 1, characterized in that the printed circuit carries an impedance converting component or components in proximity to the piezoelectric transflexural diaphragm element (3).

13. A microphone component according to claim 1, characterized in that it comprises a plurality of piezoelectric transflexural diaphragm elements (3), each individually connected to terminals (7, 9) on one and the same printed circuit (8).

14. A microphone component according to claim 9, characterized in that it is adapted to be removably fixed in a cavity by means of a clip across the elastic metal disc (16) that simultaneously establishes an electrical ground connection to said disc.

15. A microphone component according to any of the above claims, characterized in that said elements are circular and coaxial.

16. A method for the manufacture of a microphone component according to any of the above claims, characterized in that it comprises the following steps:

a) provide an anisotropic tape element by stamping out of sheet material

b) center the anisotropic tape element (4) on printed circuit (8),

c) center piezoelectric transflexural diaphragm element (3) on anisotropic tape element (4), establishing electrical contact to both electrodes (5, 6) of the piezoelectric transflexural diaphragm element (3),

d) curing the assembly where required.

17. A method for the manufacture of a microphone component according to claim 10, characterized in that it comprises the following steps:

a) provide foam and tape elements by stamping out of sheet material

b) center a double-sided adhesive tape element (15) on metal disc (16),

c) center foam element (14) on double-sided adhesive tape element (15),

d) center printed circuit (8) on foam element (14), conductor (10) facing foam element (14),

e) center an anisotropic tape element (4) on printed circuit (8),

f) center piezoelectric transflexural diaphragm element (3) on anisotropic tape element (4), establishing electrical contact to both electrodes (5, 6) of the piezoelectric transflexural diaphragm element (3),

g) center a double-sided adhesive tape element (2) on the metal back of the piezoelectric transflexural diaphragm element (3),

h) center a foam element (1) on double-sided adhesive tape element (2).

18. A method similar to claim 11, characterized in that steps b) - h) are taken in reverse order.